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(71) Applicant (for all designated States except US): **MERCK PATENT GMBH [DE/DE]; Frankfurter Strasse 250, 6493 Darmstadt (DE).**

(72) Inventors; and

(75) Inventors/Applicants (for US only): **CARTER, Graham [GB/GB]; Longhills Cottage, Newmachar, Aberdeenshire AB21 7XB (GB). CARR, Francis, J. [GB/GB]; Birchlea, The Holdings, Balmedie, Aberdeenshire AB23 8XU (GB).**

(74) Common Representative: **MERCK PATENT GMBH; Frankfurter Strasse 250, 6493 Darmstadt (DE).**

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(54) Title: **ANTI-IDIOTYPE ANTI-CEA ANTIBODY MOLECULES AND ITS USE AS CANCER VACCINE**

(57) Abstract: The present invention provides molecules, preferably designed immunoglobulins, suitable for use as an anti-idiotypic vaccine to CEA positive tumours. The molecules induce both an MHC class I and MHC class II mediated immune response to the CEA bearing tumour cells for an efficient and sustained host anti-tumour response. The present invention provides modified versions of anti-idiotypic anti-CEA antibodies, preferably mouse antibody 708, with improved vaccination properties. The modifications are related to the introduction of sequences tracts deriving from e.g. CEA, CD55 antigen and CEA cancer-specific MHC epitopes into the variable regions of said antibody molecules.

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